

REMARKS

Claims 1, 4-7, 13 and 14 are pending in the above-identified application. Claims 1, 4-7, 13 and 14 were rejected. With this Amendment, claims 1, 13 and 14 were amended. Accordingly, claims 1, 4-7 and 13-14 are at issue in the above-identified application.

35 U.S.C. § 103 Obviousness Rejection of Claims

Claims 1, 4-7, 13 and 14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the EP 997960 reference. Applicants respectfully traverse this rejection. Withdrawal of this rejection is respectfully requested.

Claim 1 recites a secondary battery comprising a positive electrode, a negative electrode, and an electrolyte, wherein the positive electrode includes a positive electrode mixture layer capable of occluding and releasing light metal, wherein the negative electrode includes a negative electrode mixture layer capable of occluding and releasing light metal, and wherein the charge capacity of the negative electrode is expressed by the sum of a first capacity component by occluding and releasing light metal and a second capacity component by precipitating and dissolving light metal on said negative electrode at charging voltages below overcharging. Additionally, claim 1 also recites that the ratio (A/B) of thickness A of the positive electrode mixture layer and thickness B of the negative electrode mixture layer is 1.1 *or more* and that each of the thickness A of the positive electrode mixture layer and the thickness B of the negative electrode mixture layer lies within the range of 80 μm to 250 μm , both inclusive, and wherein the negative electrode mixture layer contains a *carbonaceous material*.

While the EP 997960 reference teaches a positive electrode active material having various oxides, such as manganese dioxide, lithium manganese, composite oxide, lithium containing nickel oxide, lithium containing cobalt oxide, lithium containing nickel cobalt oxide,

lithium containing iron oxide, and lithium containing cobalt oxide, these substances alone do not necessarily provide for a battery which has a *charge capacity* of the negative electrode expressed by the sum of a first capacity component by occluding and releasing light metal and a second capacity component by *precipitating and resolving* light metal on said negative electrode *at charging voltages below overcharging*. Since the *charge capacity* of a battery is *not only* determined by the type of materials used, but also by the *amount* of materials used, the EP 997960 reference does not necessarily have *identical* product compositions as the present invention. Never does the EP 997960 reference actually teach a battery have a *charge capacity* which allows for the precipitation of lithium at charging voltages below overcharging. In fact, the EP 997960 reference actually teaches a battery have a *charge capacity* which *suppresses* the precipitation of lithium on the negative electrode before an overcharging condition so as to improve the charge/discharge efficiency of the negative electrode, which is nearly the opposite of what claim 1 recites. While the Examiner points to similarities between the present invention and the EP 997960, the Examiner fails to point out any evidence that the charge capacity of the battery taught by the EP 997960 reference has a *charge capacity* which allows for the precipitation of lithium at charging voltages below overcharging.

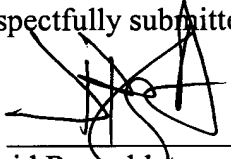
Additionally, the EP 997960 reference does not teach that the ratio (A/B) of thickness A of the positive electrode mixture layer and thickness B of the negative electrode mixture layer is 1.1 or more, as recited by claim 1 and as supported in Example 2 through 7, as illustrated in Table 1. For example, Table 6 of the EP 997960 reference recites thicknesses for one layer of positive electrode and thicknesses for one layer of negative electrode which have a ratio A/B none of which are 1.1 or more. The EP reference never teaches nor suggests having the thickness of the positive electrode layer B more than the thickness of the negative electrode

layer, and therefore does not teach or disclose a ratio (A/B) of thickness A of the positive electrode mixture layer and thickness B of a negative electrode mixture layer being 1.038 or more. While the EP reference may not strictly require that the thickness of both electrodes be identical or the same, there is no teaching or suggestion found within the EP '960 reference that would suggest that the thickness of the positive electrode layer needs to be thicker or should be thicker than the thickness of the negative electrode layer. Applicants therefore contend that since no such teaching or suggestion is made in the reference that Applicants claimed invention is not taught or disclosed by the EP reference.

In view of the foregoing, Applicant submits that the application is in condition for allowance. Notice to that effect is requested.

Respectfully submitted,

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